ABSTRACT

A nonaqueous electrolyte secondary battery which comprises a positive electrode including particles of lithium-containing layered nickel oxide represented by a general formula $Li_aNi_xCo_yAl_zM_bO_2$, wherein $0.3 \leq a \leq 1.05$, $0.7 \leq x \leq 0.87$, $0.1 \leq y \leq 0.27$, $0.03 \leq z \leq 0.1$, $0 \leq b \leq 0.1$; M is at least one selected from metallic elements except Ni, Co and Al. In the binding energy of the oxygen 1s spectrum when measuring the particles by XPS, if the peak area appearing at 529eV is set to D; the peak area appearing at 531eV is set to E; oxygen concentration ratio is set to $D/(D+E)$; and the oxygen concentration ratios at depths of L1 nm and L2 nm from the particle surface are respectively set to α_{L1} and α_{L2}, the combination of L1 and L2 in which $(\alpha_{L2} - \alpha_{L1})/\alpha_{L2} \leq 0.1$, $L1 \leq 100$, $L2 \geq 500$ is present.